REMARKS

Claims 1-12 and 14-25 are pending. Claims 1 and 14 have been amended.

Applicant would like to thank the Examiner for the interview conducted July 19, 2006. During the interview, Applicant's representative and the Examiner discussed amendments, made herein, that further distinguish Applicant's claims over Katseff and Scott.

The Examiner rejected the claims as shown in the following table. Applicant respectfully traverses each of these rejections below.

Statute	Claims	Reference(s)
35 U.S.C. § 103(a)	1-2, 4-9, 12, 14-15, 17-22, and 25	Katseff (6,301,258) and Scott (6,665,317)
35 U.S.C. § 103(a)	3 and 16	Katseff, Scott, and Anandakumar (6,801,532)
35 U.S.C. § 103(a)	10-11 and 23-24	Katseff, Scott, and Orleth (5,872,789)

Katseff describes a system of audio buffering that speeds up and slows down the rate of playback to adjust for gaps in the rate that audio packets arrive over a network at a receiving endpoint. For example, if the number of packets in a buffer is less than a threshold, Katseff slows the rate of playback. Katseff, col. 5:53-57. Similarly, if the number of packets is greater than a threshold, Katseff increases the rate of playback. Katseff, col. 6:47-50. The Examiner relies on Katseff for teaching starting playback from a buffer when a predetermined threshold is reached and when a burst has ended. Katseff does not teach making any determination based on the content of the arriving audio packets. In particular, Katseff does not describe detecting a burst of audio or taking any particular action, such as starting playback from a buffer, based on detecting a burst of audio. Katseff also does not teach stopping playback for a period based on the amount of accumulated network jitter between bursts of audio.

Scott describes another system of audio buffering in which the sender identifies packets as containing either voice or silence. The system in Scott attempts to maintain a

target jitter buffer size by either inserting an additional silence packet at the receiver if the jitter buffer is too small, or discarding a received silence packet if the jitter buffer is too large. Figures 10 and 13 of Scott demonstrate this system. The Examiner relies on Scott for teaching determining accumulated jitter in a previous burst and waiting for a silent period based on the accumulated jitter. While Figure 13 of Scott labels the beginning of two bursts, Scott does not disclose any method that uses the end of a burst as a cue to begin playing back audio data in the buffer. Scott also does not stop playback based on the amount of accumulated jitter. Rather, Scott is always playing back audio data from the jitter buffer, "[t]he advantages of the present invention are provided by the ability of the jitter buffer manager 320 to maintain jitter buffer 330 in such a way that the outputted traffic is <u>continuous.</u>" Scott, 7:66-8:2.

In contrast, Applicant's technology plays audio from a jitter buffer after detecting the end of a burst, and then stops playback for a period based on the amount of accumulated jitter. When data is transmitted over a network such as the Internet, the packets take varying amounts of time to arrive, called jitter. If audio is played back as it is received, or is buffered and then played back at the rate at which it was received, it will sound choppy to a human listener due to jitter. Applicant's technology reduces this effect by removing the jitter from audio as it arrives, and then making up for the time consumed by the jitter by increasing the periods of silence in between bursts of audio. In general, a human listener will detect gaps during a burst of audio as choppiness, but will not perceive elongated periods of silence in between bursts of audio. Therefore, to maintain the best quality of playback Applicant's technology uses the end of a burst as a cue to begin playback and then stops playback for a period in between bursts to account for accumulated network jitter.

Each of Applicant's claims recites playing back audio data after detecting the end of a burst and stopping playback for a period based on accumulated network jitter. Claim 1 recites "upon detecting that a burst of audio has ended, at the receiving endpoint: playing the audio data contained in the buffer" and "stopping playback for a silent period based on

the amount of accumulated jitter before playing subsequent bursts of audio." Claim 14 recites "upon detecting that a burst of audio has ended, playing at the receiving endpoint the audio data contained in the buffer" and "stopping playback for a silent period based on the amount of accumulated jitter before playing subsequent bursts of audio." Neither Katseff nor Scott teaches these elements. For example, Katseff does not describe detecting bursts of audio or stopping playback at all. Rather, Katseff treats the content of all packets the same and plays the packets back at varying rates to account for jitter. The effect of Katseff is more likely to be disturbing to a listener since the speed of playback affects the pitch of the audio, whereas Applicant's method, which increases and decreases the length of the natural periods of silence between speech or other audio, is less likely to be noticed. Similarly, although Scott does discuss bursts, Scott only labels the beginning of bursts and does not teach using the end of a burst as a cue to begin playback from a buffer or stopping playback based on accumulated network jitter. Thus, Applicant's claims recite a novel and nonobvious combination of elements that is neither taught nor suggested by the combination Katseff and Scott. Accordingly, Applicant respectfully requests that these rejections be withdrawn.

Moreover, the Examiner has not provided a sufficient motivation to combine Katseff with Scott. In fact, the references teach away from combination. Katseff varies the rate of playing packets and does not teach inspecting the content of packets. Katseff does not detect bursts of audio and cannot determine where to insert the silence packets taught by Scott to produce a desirable effect. Likewise, Scott inserts and remove packets and does not teach altering the rate of playback to account for network jitter. There is nothing in either Katseff or Scott to suggest that varying the rate of playback and inserting silence packets at the same time would improve the playback of bursty audio. Doing one negates the need for doing the other. Even if it were possible to combine the two, an algorithm for doing so would entail complexities that would require detailed explanation for one of ordinary skill in the art to implement, which is not present in either Katseff or Scott.

Anandakumar and Orleth do not provide the teachings that are lacking from Katseff and Scott. Anandakumar is relied upon by the Examiner for teaching a packet having an end flag. Orleth is relied upon by the Examiner for teaching determining the average jitter time between at least some packets during a sample period. The Examiner has not pointed to any section of these references that discloses detecting the end of a burst as an event that triggers playing back from a buffer or stopping playback from a buffer for a period based on accumulated network jitter. Therefore, Applicant's claims are patentable over the combination of Katseff, Scott, and Anandakumar as well as the combination of Katseff, Scott, and Orleth.

Based upon these remarks and amendments, Applicants respectfully request reconsideration of this application and its early allowance. If the Examiner has any questions or believes a telephone conference would expedite prosecution of this application, the Examiner is encouraged to call the undersigned at (206) 359-3265. Applicants believe all required fees are being paid in connection with this response. However, if an additional fee is due, please charge our Deposit Account No. 50-0665, under Order No. 418268890US from which the undersigned is authorized to draw.

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Respectfully submitted,

By____________________

J. Mason Boswell
Registration No.: 58,388
PERKINS COIE LLP
P.O. Box 1247
Seattle, 98111-1247
(206) 359-8000
(206) 359-7198 (Fax)
Attorney for Applicant